COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

Investigation by the Department of Telecommunications and Energy on its own Motion into the Appropriate Pricing, based upon Total Element Long-Run Incremental Costs, for Unbundled Network Elements and Combinations of Unbundled Network Elements, and the Appropriate Avoided Cost Discount for Verizon New England, Inc. d/b/a Verizon Massachusetts' Resale Services in the Commonwealth of Massachusetts	D.T.E. 01-20

REBUTTAL TESTIMONY OF RICHARD J. WALSH

ON BEHALF OF AT&T AND WORLDCOM

(Non-Recurring Costs)

July 18, 2001

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, EMPLOYER, AND PRESENT POSITION.

A. My name is Richard J. Walsh and my business address is 33 Francis Drive, Hillsborough, New Jersey, 08844. I am presently providing consulting services to AT&T as a Technical Analyst in the Local Services and Access Management (LSAM) / Local Connectivity Cost, Price, and Planning Division. I have also been retained by WorldCom for the purpose of analyzing and critiquing the non-recurring cost model and rates proposed by Verizon-Massachusetts in this proceeding.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my testimony is to illustrate how and why the Verizon-Massachusetts ("VZ-MA") non-recurring cost model ("NRCM") fails to comply with FCC requirements and would, therefore, inhibit competition and adversely effect customers. Specifically, I will discuss the faulty methodology and assumptions that form the foundation for the Verizon NRCM.

Appropriate non-recurring charges ("NRCs") are critical to development of the fledgling competitive local service market in Massachusetts. If NRCs are too high, Competitive Local Exchange Carriers ("CLECs") will be deterred from entering the market altogether. Inflated NRCs are textbook barriers to competitive entry. Even if CLECs obtain appropriate Unbundled Network Element ("UNE") recurring rates, wholesale discounts, and collocation terms and conditions, overstated NRCs will immediately

undo everything else the Department has done to encourage competition. As the FCC put it, NRCs must be set to "ensure that incumbent LECs do not recover nonrecurring costs twice and that nonrecurring charges are imposed equitably . . ."[1]

Verizon's NRCM violates the costing principles articulated by the FCC by:

- ? assuming out-moded and inefficient technology;
- ? charging for manual tasks that are unnecessary;
- ? including in NRCs costs that should be recovered through recurring rates; and
- ? including assumptions that have no purpose other than to inflate rates.

Q. HOW IS YOUR TESTIMONY ORGANIZED

A. Section II, which follows this introductory section, explains how the VZ-NRCM fails to comply with the pricing principles set out by the FCC. Section III details specific criticisms of the VZ-NRCM. These criticisms include that the VZ-NRCM: is based on the wrong network model; models inefficient use of OSS; includes unnecessary, redundant, and overstated work times and activities; aggregates connect and disconnect charges; and misclassifies recurring and non-recurring costs. Section IV examines the NRCs produced by the VZ-NRCM for specific UNEs to illustrate the effect on prices of the deficiencies in the VZ-NRCM which are discussed above. The conclusion, Section V, is a summary of this testimony.

[1]FCC's August 8, 1996 Order in CC Docket 96-98 (the "First Report and Order") at ¶ 750.

Q. PLEASE EXPLAIN THE EXHIBITS ATTACHED TO YOUR TESTIMONY.

A. Exhibits RJW 1-6 are network diagrams. These exhibits are described more fully in Section II of my testimony. I have also included individual element worksheets from the Verizon NRCM (Exhibit RJW 7). I will use this exhibit to illustrate the problems with the Verizon NRCM.

II. THE VZ-MA NRC COST MODEL DOES NOT COMPLY WITH THE TELRIC METHODOLOGY MANDATED BY THE FCC

Q. WHAT GUIDELINES SHOULD THE DEPARTMENT FOLLOW IN DETERMINING VZ-MA'S NON-RECURRING COSTS TO PROVISION UNES?

A. The non-recurring charges to provision UNEs should reflect forward-looking, efficiently incurred costs in accordance with the requirements set forth by the FCC pursuant to the Telecommunications Act of 1996 (the "Act"). The rates should reflect mechanized, non-manual processes and minimize costly human intervention. In addition, the charges should recover only truly non-recurring costs and not the costs of constructing and maintaining the network, which are properly recovered in VZ-MA's recurring rates.

In essence, this Department should set prices based on the costs that an efficient ILEC operating in a competitive environment, using the most efficient technology available today, would incur. Such prices will not obligate CLECs to compensate VZ-MA for costs stemming from any past or embedded inefficiency. Correct prices will encourage VZ-MA to become more efficient in the provisioning of UNEs and will encourage the development of competition in the local exchange market.

The FCC has also directed that costs should be recovered in a manner that reflects the way they are incurred. Specifically, the *First Report and Order* paragraph 745, states that:

> recurring costs must be recovered through recurring charges, rather than through a nonrecurring charge. . . .For example, we determine that maintenance expenses relating to the local loop must be recovered through the recurring loop charge, rather than through a nonrecurring charge imposed upon the entrant.

The appropriate definition of non-recurring costs and the "one time" costs not properly included in a non-recurring cost model are discussed in more detail at pages 9-12 of the Direct Testimony of Richard J. Walsh.

Q. CAN YOU DEFINE THE PRINCIPLES THAT SHOULD BE EMPLOYED WHEN DEVELOPING A COST MODEL CONFORMING TO THE REQUIREMENTS OF TELRIC?

A. The FCC's *First Report and Order* clearly defines the principles which govern setting of NRCs. Beginning in paragraph 690 the FCC summarizes its position regarding pricing UNEs using TELRIC methodology;

> The increment that forms the basis for a TELRIC study shall be the entire quantity of the network element provided. As we have previously stated, all costs associated with the providing the element shall be included in the incremental cost. Only forward-looking, incremental costs shall be included in a TELRIC study. Costs must be based on the incumbent LEC's existing wire center locations and most efficient technology available.

(emphasis added)

Therefore, the first requirement of a properly forward-looking cost model is that it must be based on "costs that assume that wire centers will be placed at the incumbent LEC's current wire center locations, but that the reconstructed local network will employ the

most efficient technology for reasonably foreseeable capacity requirements" (First Report and Order at 685, emphasis added). Second, "any function necessary to produce a network element must have an associated cost. The study must explain with specificity why and how specific functions are necessary to provide network elements and how the associated costs were developed." (*Id. at 691, emphasis added).*

Third, there are certain principles, in addition to TELRIC, which inform rate structure issues. These principles inform determinations of, for example, the circumstances in which charges should be flat-rated or usage sensitive and the circumstances in which charges should be recovered in recurring or non-recurring rates. In the First Report and Order, the FCC clearly stated the requirement that "the charges for dedicated facilities be flat-rated, including, but not limited to, charges for unbundled loops, dedicated transport, interconnection, and collocation"[2] and "that costs should be recovered in a manner that reflects the way they are incurred."[3] This means that costs directly related to the network which produces the UNE elements must be recovered through recurring rates and not via non-recurring charges.

These principles, as articulated by the FCC, form the foundation for my criticism of Verizon's NRCM. The VZ-MA NRCM did not assume a reconstructed local network employing the most efficient technology for reasonably foreseeable capacity requirements. Verizon did not demonstrate with specificity why and how specific

[2] First Report and Order at ¶ 744.
[3] Id. at ¶ 745.

functions are necessary to provide network elements. And, lastly, the tasks identified in the Verizon NRCM represent an attempt to recover recurring costs through non-recurring charges.

Q. PLEASE EXPLAIN WHAT VZ-MA WOULD HAVE TO DO TO MAKE ITS STUDY FORWARD-LOOKING.

A. First, and most fundamentally, VZ-MA would have to abandon its filed cost study and start from scratch to develop a cost study based upon a forward-looking network construct. Instead, the NRC network model used by VZ-MA was based on the network currently in place which requires significantly different tasks to provision UNEs than would be required in a forward-looking environment.

Second, VZ-MA must reflect only efficient forward-looking methodologies for interconnection.

Finally, VZ-MA's cost study would have to set non-recurring costs relying on a forward-looking, properly maintained and populated OSS as part of its network. The data contained in the OSS would support the total demand, and virtually be error free. This means data such as service locations (i.e., customer and facility locations, plant conditions, parameters that support forward looking technologies, etc.) and the necessary facilities to support that demand would be contained in VZ-MA's databases and would be current and accurate. The labor required to build and maintain this information in the databases is properly classified as a recurring cost activity. This data,

like the physical plant, is an asset which benefits VZ-MA as well as the CLECs. Consequently, this cost should not be recovered through NRCs.

III. SPECIFIC CRITICISMS OF THE VZ-MA NRCM

A. VZ-MA'S NRCM IS BASED ON THE EXISTING OUT-MODED AND INEFFICIENT NETWORK. AS A RESULT, THE VERIZON NRCM ASSUMES INEFFICIENT UTILIZATION OF LABOR DUE TO THE USE OF REDUNDANT AND INAPPROPRIATE INTERCONNECTION TASKS THAT FAIL TO REFLECT THE CAPABILITIES OF THE OSS.

Q. WHAT IS YOUR FIRST CRITICISM OF THE VZ-MA NRC MODEL?

A. VZ-MA has based its NRC cost study upon its existing embedded network. VZ-MA then asserts that it has made certain forward-looking adjustments to update its backward-looking study into a forward-looking model. This halfhearted attempt to upgrade is clearly not sufficient to meet TELRIC requirements.

Q. DO YOU HAVE A SERIES OF EXHIBITS THAT ILLUSTRATE WHY THE NETWORK MODELED BY VZ-MA IS OUTMODED AND INEFFICIENT?

A Yes. EXHIBIT RJW-1 is a conceptual diagram of Verizon's forward-looking network. It reflects the physical equipment (i.e., the plant) necessary in a forward-looking environment to produce the loop and port elements. The local loop network element is defined in 47 C.F.R. **§ 51.319** as "a transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and an end user customer premises." A local loop is created by the placement of copper cables from the NID to the SAI. At this point, the loop takes one of two available paths to the central office (e.g., through copper feeder or through DLC over fiber feeder). Within the central

office, copper feeder loops will have a termination point on the MDF. Fiber feeder loops enter the Central office on digital facilities, where they can be directly connected to the LDS, or converted to analog UDLC facilities having a termination point on the MDF.

EXHIBIT RJW-2 shows the physical connections that are necessary for Verizon's retail (loop & port) services. The forward-looking network would produce two types of ports, analog and digital. Analog ports (like the analog facilities produced by the copper feeder loops and UDLC pairs) will have a termination point on the MDF. It is at this location (the MDF) that cross-wires are placed to connect the loop and the port. Digital ports are connected to digital facilities which then connect the fiber feeder network to the remote terminal IDLC equipment. Digital loop/port connections are made electronically by the OSS.

EXHIBIT RJW-3 represents the physical connections that are necessary for interconnecting the UNE-loops to the CLEC's equipment (CFA). For copper feeder loops a connection is made at the MDF. For fiber feeder loops, the DS-0 path is redirected to the CLEC's equipment via the OSS.

EXHIBIT RJW-4 represents the physical connections that Verizon says are necessary for interconnecting the loops to the CLEC equipment. It is on this diagram that Verizon converts the IDLC fiber feeder loops to UDLC so terminations can take place manually at the MDF. As you can see, the digital loops are not efficiently redirected to the CLEC's equipment, but instead go through a costly conversion to UDLC facilities

appearing on the MDF. This type of NRC activity is not forward-looking, is not least cost, and doesn't utilize currently available efficient technology.

Q. WHY DO YOU STATE THAT VERIZON'S NETWORK ASSUMES OUT-MODED AND INEFFICIENT TECHNOLOGY.

A. Verizon describes the network used to determine non-recurring loop rates as follows: "same mix of technologies that drives Verizon MA's recurring cost model: 20 percent copper, 55 percent Universal Digital Loop Carrier ("UDLC"), and 25 percent Integrated Digital Loop Carrier ("IDLC")."[4] Verizon claimed their forward-looking IDLC product was configured as both universal Digital Loop Carrier and integrated (GR303) Digital Loop Carrier. In the Panel's testimony on page 75,[5] Verizon stated that "Fiber-fed DLC switched services are provisioned using an integrated DLC in the forward looking model. Other services require a universal interface, such as individual 2-wire analog loops or data services like ISDN and DDS." There is no reason to use embedded UDLC in the cost model. ISDN and DDS services can be provisioned using Fiber-fed IDLC. In fact, ISDN services are more efficiently provisioned on IDLC (GR-303), requiring only 1 port, as opposed to 3 ports on UDLC. Loops can also be provisioned digitally and this should be the case if Verizon assigns facilities utilizing fiber feeder. There is no reason, other than increasing NRC rates, for the application of UDLC in a forward-looking network construct.

[4] Non-Recurring Cost Testimony of Mr. Bruce F. Meacham at 6.
[5] The page number reference is to the hard copy of Verizon's direct panel testimony distributed by Verizon on May 8, 2001.

Q. PLEASE EXPLAIN WHY YOU FEEL UDLC IS AN OUT-MODED AND INEFFICIENT TECHNOLOGY.

A. Universal Digital Loop Carrier (UDLC) is 1970's technology. At that time, the telephone companies deployed UDLC to serve additional demand and provide loops to customers located quite a distance from the central office.

During the 1970's the remote terminal DLC equipment converted analog signals from the customer's telephone set to digital signals which traveled over facilities to the central office DLC equipment. In the central office it was converted back over to analog and had an appearance on the MDF. Conversion to analog was necessary because switches and switch ports at this time were all analog. Therefore, at the MDF, the telephone company would connect the cable pair to the office equipment thus giving the customer service.

When digital switches became available, it was no longer necessary to convert DLC back to analog facilities at the central office. The remote DLC could be directly integrated into the digital switch. The switches and remote terminals both spoke this new digital language. This improvement also permitted elimination of costly central office DLC equipment. The development of IDLC significantly improved the quality of service, because it eliminated the cumbersome "analog to digital and back to analog" conversion, which seriously impaired the quality of service, particularly for modem Internet users.

The NRC costs modeled by Verizon reflect the use of actual embedded UDLC, ignoring the fact that IDLC is the efficient forward-looking technology to use for fiber loops. In addition, Verizon intends to use exclusively UDLC for unbundling fiber loops, and has chosen this interconnection methodology to generate the highest possible NRCs, which result from the need for additional manual central office MDF wiring. This out-moded and inefficient technology is a prime example of the inflated NRCs generated by Verizon's improper network assumptions. This anti-competitive impact is readily apparent in the inefficient migration process Verizon proposed for customers currently served by fiber feeder loops. I will discuss this issue in more detail later in Part IV of my testimony.

Q. WHAT ARE OTHER RAMIFICATIONS OF VERIZON'S CHOICE TO MODEL ITS NRCM ON THE EXISTING NETWORK?

A. Verizon's failure to make properly forward-looking network assumptions in modeling NRCs has other ramifications, such as imposing the cost of loop conditioning on CLECs. The recurring rates should reflect the costs associated with a reconstructed network. Verizon's own loop cost studies are not based on the "actual" loops used by competitors, but instead on the forward looking cost of constructing new loops. These new loops do not include load coils or bridge taps. Thus, the recoverable recurring cost of UNE loops reflects a "clean loop." Similarly, NRCs should be based on "clean loops." Consequently, the cost associated with loop conditioning elements such as "Aerial Bridged Tap Removal - One Occurrence, Aerial Bridged Tap Removal -

Multiple Occurrence, Aerial Load Coil Removal - 21K Ft, etc." cannot be recovered in a TELRIC-Compliant NRCM.

Furthermore, even if "un-loading" activity is considered, it should be treated as a network maintenance activity. Unloading produces clean useable loops for specific elements from which all users of the network will benefit. Thus, if recoverable at all, unloading should be classified as a recurring cost activity. Verizon will have access to these loops for their own retail services when the CLEC services are disconnected. Verizon will not have to perform similar tasks to serve their own future customers. Unless these costs are treated as recurring rather than non-recurring, Verizon will receive a windfall whenever an end-user returns to Verizon after being served by a CLEC.

B. VZ-MA'S NRCS DO NOT REFLECT EFFICIENT USE OF OSS.

Q. DO YOU HAVE COMMENTS ON THE WAY THAT VZ-MA HAS MODELED THE USE OF ITS OSS FOR PROCESSING SERVICE REQUESTS?

A. A forward-looking cost model should reflect the greatest feasible electronic exchange of information between companies. VZ-MA's model fails to do so, in several ways.

First, VZ-MA's model assumes too high a level of manual intervention in the service ordering process. A TELRIC study of NRCs must reflect a wholesale environment in which VZ-MA's customers are the CLECs, not end-users. Consequently, the study must recognize that the CLECs will interact with VZ-MA electronically when placing

UNE orders. In an efficient network, orders for UNEs flow through the OSS (preordering, ordering, provisioning, repair, maintenance and billing) with little or no manual intervention. Essentially, once the customer and desired services have been accurately identified and transmitted into the system, the integrated software and databases of the OSS perform the remaining functions necessary to align and activate the necessary elements.

One significant flaw in VZ-MA's model is that it needlessly introduces manual steps where automated processes are readily available, more efficient, and less costly.

Q. IN YOUR OPINION ARE THE LEVELS OF SERVICE ORDERING FALLOUT THAT VERIZON HAS IDENTIFIED APPROPRIATE FOR A FORWARD-LOOKING COST MODEL?

A. No. The levels of manual intervention indicated by the model developers have two basic flaws. First, the level of fallout is not obvious. It can only be obtained by combining the typical occurrence percentage with the forward-looking adjustment.

The second flaw is in the TISOC task descriptions used in the service ordering process. The VZ-MA NRCM developers assumed that the TISOC work group will, as a result of fallout, correct and manually create requests in Verizon's system. This assumption is completely wrong in a forward-looking network. The ILEC is only responsible for processing a properly formatted request. When the OSS encounters errors, Verizon should notify the CLEC that OSS couldn't process the request as specified. This notification function is inherent within OSS software. As the OSS attempts to create the order and encounters errors, the OSS should be instructed to return those errors back

to the originators, the CLECs. Instead of following this process, the developers of the NRCM modeled manual processes such as receiving request via fax, or phone call and performing the necessary steps to create the order themselves.[6] This is neither forward-looking nor efficient.

Q. PLEASE EXPLAIN THE PROCESS BY WHICH A CLEC PLACES AN ORDER AND FALLOUT WILL OCCUR.

A. The process involves three primary functions; pre-ordering, ordering, and provisioning. It is conceivable that during some of these functions there may be fallout attributable to the CLEC.

The Pre-ordering process involves an electronic exchange of information or an inquiry into VZ-MA's OSS databases. There would be no fallout during this process. VZ-MA appears to agree in principle with this because it did not include any in its study.

The Ordering process involves the placement of information on an electronic request (i.e., the LSR). VZ-MA has specific rules regarding the format (e.g., such as which forms to use) and the data contained on those forms. Here the CLEC is acting like an agent of VZ-MA. In theory, if a CLEC wishes to place an order, it must follow the same ordering rules as do the Customer Service Representatives (CSR) of VZ-MA's business offices. If the service request is incomplete or contains errors in format or content, the OSS should reject the request back to the CLEC. In theory, this process

[6] Even though there is no mention of Faxes and or phone calls listed in the TISOC task descriptions, the work activity expressed by the VZ-NRCM reflect what would be necessary if they had to manually create the service order as opposed to processing an electronic request.

is the same for VZ-MA. If the CSR includes incomplete data or contains errors in format or content, the order will be rejected back to the CSR.

Verizon has modeled instead, in its NRCM, a resolution process that will involve Verizon's correction of information so that the order can continue through the provisioning process. This assumption should not be allowed, because it unnecessarily and inappropriately inflates NRC. Instead, orders with errors should be rejected back to the CLEC for correction. If the OSS detects the error situation, then the OSS should be able to automatically reject the order with the appropriate error message back to the originator for correction. Verizon has documents for CLECs at Verizon's web site that suggest exactly what I have been referring to[7]. This is a clear indication that the VZ-MA NRCM developers used a different methodology to estimate NRCs, certainly a more costly, inefficient, and non-forward-looking method, than is actually used by Verizon.

Fallout should not exceed 2%, due to the conditions I have suggested in my direct testimony, and the time required to resolve these error condition should only include

[7] See document at Verizon's web site:
http://128.11.40.241/east/wholesale/html/pdfs/business_rules/February%202001%20Release%20Errror%20Messages.PDF, titled: "Bell Atlantic Order Error Messages." Section 5, reads;
5.0 Error Messages – Manual Query Messages

> The following section standardizes the phrases associated with query messages to provide clear instructions on what is required of the CLEC to continue processing the request and to allow CLECs to process error messages systematically and timely. In the Error Message Text column below, italicized words, i.e. *Field Name, Reason* will vary and provide additional information. ***All work on the LSR has stopped until the query has been resolved. Queries should be resolved by the submission of a supplemental order with the same PON*** (emphasis added).

This section suggests Verizon's OSS has detected error conditions for which all processing on the LSR has stopped. It even suggests that the CLEC is responsible to submit a supplemental (correction) order so that

enough time to construct the appropriate message to be returned back to the CLEC for correction. The OSS should function as it does for Verizon's retail operations, and automatically deliver incorrectly formatted service request back to the originators, the CLECs. Because the OSS should be detecting and delivering notice of such errors, no manual time is required. Thus, the AT&T NRCM reflects no time associated with service order fallout.

1. *Verizon's Rate Application for Additional Elements Ordered on a Single Request Overstates NRCs by Ignoring the Impact of Efficient Use of OSS.*

Q. DO YOU HAVE ANY COMMENTS WITH REGARD TO THE STRUCTURE OF VERIZON NRCM FOR MULTIPLE ELEMENTS ORDERED UNDER A SINGLE REQUEST?

A. Yes. Verizon's NRC rate shows absolutely no additional labor cost for the service ordering process of additional elements ordered on a single request. Therefore, Verizon is apparently recovering all such costs on the initial request. Thus, any CLEC which only orders a single UNE is paying for fallout conditions that might occur as Verizon has stated, due to multiple elements being ordered on one request.

Moreover, there is no basis for including in NRCs the cost of determining whether demand can be met. Verizon has asserted in other cost cases that requests for more than a specific number of facilities need to be detected by the OSS so that Verizon can alert various departments of the pending request, and thus the frequency and time as

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processing can begin again.

stated is appropriate. Such would be the condition if the CLEC ordered 10 UNE-Loops on one service order.

Verizon contends that manual processing by the TISOC work group is necessary to forward this request manually so Verizon can perform field checks to insure that it can meet the request. This is not a valid TELRIC charge because a primary principle of TELRIC is that all demand is accounted for (i.e., Total, the first word in TELRIC). Therefore, it is inappropriate to collect a fee to insure that a request can be fulfilled. Imagine a company placing a large order for office supplies with a vendor and this vendor says "there will be an extra charge to see if I can fulfill the request." It's ridiculous. However, this is the exact approach the VZ-MA NRCM developers have proposed.

2. The Provisioning Process Identified by VZ-MA NRCM Reflects Inefficient Use of OSS.

Q. PLEASE EXPLAIN THE PROVISIONING PROCESS THAT FOLLOWS SERVICE ORDERING.

A. The Provisioning process includes the assignment of network inventory and the fulfillment of the service order request. It is the inherent function and design of the OSS to perform this task. The OSS has a set of specific rules to assign the appropriate facilities (i.e., network inventory) to the request and in all cases it's the preferred method. When I was in Nynex, this methodology was conveyed to management and craft technicians over and over again, because the OSS is programmed to pick the most

appropriate facilities at less cost, and humans tend not to make the same choices making manual assignment a higher cost option.

The type of processing fallout in the provisioning process should be attributed to incorrectly supplied CLEC information, and again this should be minimal. If the CLECs supplied information (data) is not correct, the order needs to be returned back to the CLEC for correction because they are the responsible party for providing the correct information. The process reflected by the VZ-MA NRCM should demonstrate that this happening, and it does not.

If the OSS cannot process (provision) the request automatically because of the complexity of the request, the CLEC should be assessed a manual NRC only if VZ-MA can demonstrate the manual process is needed each and every time a particular condition is encountered and exactly why Verizon is unable to process the request. VZ-MA has made no such demonstration. Instead, it has identified conditions that appear to be business as usual.

There are two workgroups responsible for the assignment of network inventory (provisioning), the MLAC for POTS type of services (i.e., exchange loops and ports) and the CPC for complex or interoffice special circuits. Verizon's NRCM reveals some disturbing particulars about each workgroup and the work Verizon improperly claims is necessary due to service order fallout.

The MLAC workgroup has only one task identified in the NRCM; "Assign outside plant and central office facilities for non-flow through service orders." As I have previously stated, this is the inherent function of the OSS, and the preferred method of operation. Verizon has not identified nor supplied the appropriate evidence that warrants a conclusion that this manual processing is required. Instead, Verizon claims that the fallout percentage is a reflection of fallout studies (reports) indicating present experience and that this is enough to warrant the recovery of cost. This approach violates TELRIC principles.

Moreover, any fallout associated with database or system maintenance should properly be recovered in the recurring rates. I was directly involved in fallout studies while I was part of the management team within NYNEX. It was our goal to reduce corporate overhead, and deliver the assigned orders as efficiently as possible, by enhancing the OSS, correcting mismatched databases, maintaining the links between the systems, or by instructing the technical workforce on the proper methods necessary to meet that goal. Just because the corporation has a fallout report, is not a basis for recovering the cost of that fallout in an NRC. In order for fallout to be appropriately assessed to the CLEC, Verizon must demonstrate that the resolution of the fallout will benefit only the CLEC. If the fallout resolution is a correction of the databases, a cost that is normally reflected in OSS maintenance expense (recurring), it should not be assessed to the CLEC as an NRC.

There are two major concerns I have with the only task identified for the MLAC. First, I find that the MLAC task itself is ambiguous as to the cause of the fallout, and second the application of MLAC fallout within the NRCM is exactly the same for every UNE. This in my opinion, does not reflect actual conditions one would expect to occur. It calls into question the validity of the claimed cost for every UNE. Verizon failed to identify actual reasons for this MLAC manual assignment. In the absence of evidence that all such manual intervention was due to CLEC caused errors, such as incorrect data that could only be fixed by a correction service order, there is no basis to recover all this expense in the NRC.

For these reasons I recommend that this Department reduce the percentage of fallout for the MLAC to 2% based on the limited fallout directly related to the CLEC supplying incorrect information, for which the CLEC is responsible.

3. The Provisioning Work Tasks Associated With CPC and RMAC Work Groups Demonstrate Excessive Manual Involvement.

Q. YOU MENTIONED THAT THE CPC WORK GROUP IS INVOLVED IN THE PROVISIONING PROCESS, WHAT CONCERNS DO YOU HAVE ABOUT VZ-MA'S NRCM REGARDING THIS DEPARTMENT?

A Verizon's flawed methodology becomes even more alarming when you examine the provisioning[8] tasks for the CPC and the RCMAC workgroups. Here again, the Verizon NRCM suggests that manual assignment and processing is necessary. Presumably, this would be the result of service order fallout or the inability of the OSS

[8] VZ-NRCM accumulates labor cost for CPC & RCMAC workgroups, among others, under the rate element called "Provisioning."

to make the appropriate assignments. Verizon has claimed the fallout rate for some complex services to be as high as 100%, indicating that no orders will be able to flow through. This is an unreasonable assumption.

Within the NRCM Verizon has identified only two tasks for the CPC-Specials work group. Here again, because I have been involved with the mechanization of manual tasks to OSS functionality, I know this is not at parity with similar retail services nor reflective of efficient corporate goals.

Verizon has only identified actual work times of the CPC-Specials work group against one element, Optical IOF. Verizon uses this same work time for every UNE that requires the responsibility of this work group. Unbundled elements such as; "IOF DS1," "IOF DS3," "Entrance Facility DS-1 Channel Term," "Entrance Facility DS-3 Channel Term," "Mux DS-3 to DS-1" are uniquely different. However, these elements all refer to the work time posted against the IOF Optical element for CPC-Specials Task #1, with 100% fallout today. Forward-looking adjustments have only slightly reduced this level of fallout to 67% (still an unbelievable percentage).

CPC-Specials Task #2 VZ-MA claims to be necessary 100% of the time. Task #2 is defined as "Release order from TIRKS to WFA for coordination and dispatch" which again would be a function performed automatically by the OSS. In my opinion, there is no reason why every CLEC request needs to be manually released to WFA. This task inhibits an efficient process normally performed by the OSS.

The fallout percentages identified by the Verizon SMEs fail to recognize the inherent capabilities of OSS or the similar services Verizon processes efficiently for itself or retail customers. Therefore, I recommend that the level of fallout be reduced to the level set forth in the AT&T NRCM, which reflects the inherent capabilities of automatic assignment of the OSS.

For the CPC-Message workgroup, the VZ-MA NRCM reflects manual assignment with fallout rates as high as 100% for processing CLEC orders today. Verizon's forward-looking adjustment reflected absolutely no difference (still 100% occurrence). For the same reasons I have just identified, I recommend the reduction of this fallout to reflect the existing capabilities of automatic assignment and circuit design processing by the OSS.

I can assure you while I was at Bellcore and responsible for OSS integration testing, I had many test cases that demonstrated this OSS flow-through functionality. Although my test cases did not represent actual CLEC UNE orders, they did in fact represent many of services that are similar to those services VZ-MA is offering to CLECs today. Assuming unnecessary manual functions is not cost effective, nor is it forward-looking.

The provisioning process as I have described thus far has an ongoing opportunity for mechanization and the reduction of repetitive manual tasks that allows corporations to reduce delivery cycles, and improve bottom line. I believe Verizon is well aware of the capabilities inherent within the OSS. This was not reflected as they identified the tasks

in the provisioning process. Verizon should not be allowed to charge NRCs that include unnecessary manual activity for what should be automated processes.

Q. YOU ALSO MENTIONED THE RCMAC WORKGROUP IS INVOLVED IN THE PROVISIONING PROCESS, DO YOU HAVE CONCERNS ABOUT VERIZON CLAIMED NRC COST FOR THIS WORK GROUP AS WELL?

A. Yes. The RCMAC workgroup ensures that switch translations are correctly transmitted to the various local digital switches to affect the services Verizon provides. Here the opportunity for mechanization of manual tasks with the installation of OSS also exists. The MARCH system is largely responsible for the format and validation of the necessary instructions to activate, change, or terminate a service within the switch. Information on the service request is received, formatted and transmitted to the various LDSs by the OSS. Fallout occurs because of data error conditions that are rejected by the switch, or when the OSS recognizes the necessity for manual intervention. Here too, the fallout should conform to the same characteristics I have identified in my direct testimony.

Verizon has also failed to identify the level of fallout specific to various elements, as one would expect to find in an efficient end-to-end process flow. The manual activities Verizon has associated with the RCMAC workgroup fall largely into the category of coordination directed by another group, the RCCC, and/or the fixing of service related problems that are not caused by the CLEC request but are caused by incorrectly transmitting the wrong instructions, a cost in my opinion that should not constitute a valid

NRC. For the same reasons I have stated above, the cause and levels of fallout claimed by Verizon have not been justified.

Q. PLEASE HIGHLIGHT SOME OF THE CONCERNS YOU HAVE WITH THE TASKS ASSOCIATED WITH THE RCCC.

A. The coordination efforts attributed to the RCCC prove only that Verizon can transform what should be a seamless process into a highly manual process incurring outlandish NRCs. The tasks of the RCCC seem to mimic the inherent capabilities of OSS, or reflect responsibilities of management, ensuring that technicians do as they are instructed to do as requested by the service order produced by the OSS. These tasks would be redundant and unnecessary tasks in the efficient end-to-end process flow which should be the basis for setting NRCs.

For those reasons I recommend RCCC costs not be recovered as NRCs, but included in corporate overhead, reflecting the corporate management of service delivery.

Q. IF VZ-MA IS EXPERIENCING THIS LEVEL OF MANUAL INTERVENTION TODAY IN PROCESSING CLEC SERVICE REQUESTS, WHY SHOULDN'T IT ASSUME THAT FOR ITS NRC MODEL?

A. There is no real-world basis for VZ-MA to assume all of this manual intervention. The CLECs are sophisticated telecommunications carriers, who have every commercial interest in presenting service order information to VZ-MA electronically, on a schedule, in a format and with accuracy sufficient to achieve the highest possible level of flow-through. The mere fact that the VZ-MA NRCM developers created a manual process is not a valid reason to impose such costs on the provisioning of UNEs. In my opinion,

in order for a cost study to be forward looking, it needs to represent processes that are efficient, and embrace forward-looking methodologies for interconnection.

As an example, the TSIOC workgroup task #1[9] for a new initial two wire loop, has a Connect Typical Occurrence of 38%, which indicates a 38% fallout rate. However the forward-looking adjustment is set to 61%. When these percentages are multiplied together the result is a 23% fallout rate. Or, simply put, in Verizon's model, almost one in four orders (for a two wire loop) will have errors on them which VZ-MA will elect to correct and process manually without returning them back to the CLEC for correction.

VZ-MA's assumed fallout is excessive and will have perpetuating consequences on future modifications to the same accounts. If the CLEC made a mistake, the CLEC needs to know the error to correct its own databases and procedures. If that 23% of the orders were being returned to the CLEC for correction, then the CLEC will take action to eliminate the inefficiency on its side and reduce its internal costs. Like VZ-MA, CLECs have every interest in delivering services to their customers in the most efficient cost effective manner. CLECs shouldn't be forced to pay for VZ-MA's inefficiencies through inflated NRCs.

Q. IS THERE ANY KIND OF JEOPARDY PROCESS REFLECTED IN THE VZ-MA NRCM?

A. No. What is evident in VZ-MA's cost study is that VZ-MA technicians are manually contacting other departments (possibly by phone) and referring problems to the

[9] TISOC Task #1: "Receive Local Service Request (LSR) from the CLEC and print, review, type and confirm

RCCC/RCMC. It appears that once this happens, the RCCC/RCMC contacts yet another department to have the problem fixed. Such tasks as the RCCC/RCMC "contact CPC to resolve design problems" are an example of such unnecessary work activities. It is extremely unlikely that the RCCC/RCMC would know that a design problem existed on the order. Therefore, the cost study does not reflect the most efficient method of error resolution.

Q. CAN YOU PLEASE PROVIDE EXAMPLES OF HOW VERIZON DID NOT PROVIDE REASONABLE PROOF OF THEIR CLAIMED FALLOUT RATES AND NEED FOR MANUAL INTERVENTION?

A. While Verizon has identified the types of fallout encountered by the TISOC workgroup, such fallout is inconsistent with the task descriptions provided. Verizon claims the TISOC should be reimbursed for time necessary to receive the request, print and resolve the error, then type it manually into their OSS.[10] These types of error conditions should result simply in the action necessary to return the order to the originator i.e., the CLEC, for correction. The TISOC workgroup doesn't correct the errors themselves, but needs only to return the order with the appropriate error condition routed back to the CLEC.

The OSS that detected the error in the first place should be automatically programmed to re-direct the order back to the CLEC. Examples of errors in this category include:

1. An invalid LSR field has been populated.

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the order requests for new installation and/or account."

[10] Verizon's NRCM TISOC Task # 1, Receive Local Service Request (LSR) from the CLEC and print, review,

2. An LSR field contains invalid data.

3. The address populated on the LSR does not match the address in "LiveWire."

4. A required field has not been populated.

5. The FEATURE Field contains invalid data.

6. A required form has not been submitted.

7. A supplemental service order has been sent on an LSR when the service order has already been completed.

8. The LOOP is not qualified as requested (e.g. loop length too long, loaded facilities, no copper facilities available, spectrum incompatibility issues).[11]

9. The retail service or line cannot be migrated (e.g., BOSS/CRISS account is not live).

10. A problem with the telephone number provided (e.g. incorrect Area Code, incorrect Wire Center, no account found, no match to end-user name, no match to end user address, status is non working, status is disconnected).

11. Due date is in jeopardy due to facilities (e.g. facility problems, no spare facilities, no copper facilities available).[12]

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type and confirm the order request for new installation and/or account.

[11] TELRIC principles suggest all demand is accounted for in the recurring rates. In other words, the facilities are located where the demand is needed, and the design and construction of that plant meets the required conditions of the elements themselves. Here, Verizon is seeking additional monies for conditioning their plant. Any modifications to the plant would be Maintenance activities, and thus should be excluded from

12. Duplicate Purchase Order Number (i.e., a new PON has been received and the identical work being requested on the new PON is pending or completed by another PON).

13. A pending order exists on the same account in which the LSR is requesting activity.

The forward-looking NRC cost should reflect only those instances where the CLEC was the reason for the Request for Manual Assistance ("RMA"). In addition, when the data on the request is incorrect, the party responsible for the resolution is the CLEC, and therefore orders must be returned to the CLEC for resolution.

C. THE VERIZON NRCM IS RIDDLED WITH ADDITIONAL UNNECESSARY, REDUNDANT, AND OVERSTATED WORK TIMES AND ACTIVITIES.

Q. IF WE WERE TO COMPARE THE AT&T NRCM TO THE VERIZON NRCM SHOULDN'T WE EXPECT TO SEE SIMILAR TASKS FOR THE SAME ELEMENT TYPES?

A. Yes. However, when you compare the models "side-by-side" what is most obvious are the additional unnecessary tasks for which Verizon seeks recovery. Verizon has modeled a process which is plagued by inefficiencies and meaningless tasks.

One of the necessary tools needed to evaluate the tasks Verizon says are necessary in provisioning a UNE request is an end-to-end process flow depicting the various interactions of both the mechanized systems and manual tasks.

NRCs.

[12] This is an error condition detected by the MLAC Assignment OSS (LFACS). The TISOC doesn't detect

Q. DID AT&T REQUEST THESE PROCESS FLOWS FROM VERIZON?

A. Yes. AT&T asked in AT&T 6-5 "For each non-recurring charge which Verizon is proposing, please provide a process flow diagram depicting the sequence in which tasks are performed." Verizon's reply indicated that they had not prepared individual process flow diagrams for each non-recurring charge. Rather, Verizon MA relied on the identification of the work activities specified by the supervisors staff people responsible for each work center. This is an unacceptable response.[13]

Q. USING THE ANSWER PROVIDED BY VERIZON IN AT&T-6-4, CAN YOU DETERMINE THE LOGICAL ORDER OF EVENTS NECESSARY TO MAKE AN ACCURATE EVALUATION OF THEIR CLAIMED NRC COST?

A. No. Verizon's reply to AT&T 6-4 indicated, "the average times for each activity were transferred in the same logical order to the NRCM." However, that is not the case. Verizon's format of its NRCM displays work groups and tasks that each work group might perform when fulfilling a CLEC request, but the relationship of these workgroups is in no logical order. For instance, the 2-wire loop worksheet displays tasks for TISOC, RCCC, MLAC, CO FRAME, and FIELD INSTALLATION work groups. The processing of the CLEC request may begin with the TISOC, however, it is not passed to the RCCC before it is assigned by the MLAC. Thus Verizon's claim that this process is in a logical order is false.

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this type of error. It results from no available inventory and according to Verizon's answer ATT VNJ-142-h when facilities are unavailable, the resolution time is not considered an NRC.

[13] Verizon has access to this information, and as such they should provide it. See First Report and Order @ 680: "We note that incumbent LECs have greater access to the cost information necessary to calculate the incremental cost of the unbundled elements of the network. Given this asymmetric access to cost data, we find that incumbent LECs must prove to the state commission the nature and magnitude of any forward-

Furthermore, because there is no representation of any OSS processing, flow-through cannot be clearly determined. A proper process flow will depict steps happening in sequence. For instance using the same the 2-wire loop worksheet, the forward-looking occurrence factor applied to the RCCC in V-MA NRCM, nets an average involvement of approximately 20%. This indicates this work group is required 20% of the time. However, it is not clear from this worksheet what events trigger this occurrence. This calls into question whether this work group is necessary at all. A more glaring example can be found with the same work group in the EO Trunk Port (Initial) worksheet. Here Verizon claims the RCCC involvement is currently required 100% of the time, and even when the forward looking occurrence factors are applied, this work group is necessary roughly 50% of the time. Strangely enough in VZ-MA's NRCM certain tasks will always be required. For instance, RCCC task #1 is "Access WFA/C to begin coordination process. (Screener)" the net results of this task will be required 50% of the time. Yet, task #2 "Analyze order for work activity. (Screener)" is required all the time (100%). If you only access WFA/C on 50% of the orders how would you be able to Analyze 100% of the orders for work activity. Again, Verizon's study does not make logical sense.

Q. PLEASE EXPLAIN THE IMPACT ASSOCIATED WITH VERIZON'S APPROACH TO MODELING NRCS.

A Verizon choose as their first step to review and record the functions of various departments used for provisioning CLEC UNE requests on Verizon's existing network.

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looking cost that it seeks to recover in the prices of interconnection and unbundled network elements."

This recording of functional activities had the effect of reflecting the worst case scenarios, collecting as many instances as possible to reflect the highest possible cost.

For example, Verizon seeks to recover Field Installation activities as a non-recurring cost in UNE-Loop orders when Verizon chooses to dispatch a technician. The Field Installation activities between the Central office and the customer's NID, however, are directly related to the recurring capital expense associated with producing the UNE-Loop. Under TELRIC principles any such expense should be recovered in recurring charges, because it will benefit the network as a whole.

Q. ASIDE FROM THE USE OF A BACKWARD-LOOKING NETWORK CONSTRUCT AND SEEKING RECOVERY FOR UNNECESSARY WORK ACTIVITIES, ARE VZ-MA'S WORK TIMES REASONABLE?

A. No. In addition to reflecting activities that are unnecessary in a TELRIC environment, VZ-MA has also substantially overstated the work times required.

As an example, the NOC total time to turn up a single DID exceeds an average workday (more than eight hours to turn up a single trunk).

The NOC is normally responsible for trunk side terminations. VZ-MA NRCM reflects 100% manual processing and unbelievable labor times associated with creating the link between the switch and the end user customer. For example DID trunks allow an incoming call to a PBX or other customer premises equipment to reach a specific person without the assistance of an attendant. DID numbers allow direct access to

PBX extensions, while DID trunks link the PBX to the central office. The VZ-MA NRCM developers claim that the NOC will need over 8 hours of manual labor to create and turn up a single DID trunk. I have personally seen CLEC trunk side terminations being created in a completely manual environment by a NOC in far less time. As a consultant to Lucent, I was part of a management team responsible for line and trunk side terminations of CLEC offered services. Lucent offered this outsourced translation service to CLECs who did not have resources to perform the task themselves.[14] I saw many DID type trunks, among other types of trunks, being installed and turned over to the CLEC in less than an hour's time.

Q. ARE THERE PROBLEMS WITH OTHER TASKS OR WORK TIMES VERIZON HAS IDENTIFIED?

A. Yes. There are many. In the Verizon NRCM, virtually every department has tasks which are ambiguous as to the type of function they perform, often reflecting administrative activities, or activities necessary to maintain or construct the network. On the other hand, the sponsors of the AT&T NRCM took extra effort to clarify the specific tasks necessary and classify each activity as either non-recurring or recoverable in recurring rates.

Generally speaking, the tasks reflected on the worksheets for each element need to pass a reasonability test, as to whom will benefit from that task. Secondly, the task must represent a discrete unambiguous work function. As an illustration, I have shown on the following table, the tasks Verizon claims are necessary at the TISOC work center.

Step	Description (in VZ-MA NRCM)
	TISOC
1	Receive Local Service Request (LSR) from the CLEC and print, review, type and confirm the order request for new installation and/or account.
2	Receive Local Service Request from the CLEC and print, review, type and confirm the order request for changes in existing account
3	Respond and/or change CLECs pending Local Service Request.

These descriptions are ambiguous. In a forward-looking efficient environment, CLEC orders will be transmitted electronically and the OSS will be responsible for the identification of errors triggering the tasks performed at the TISOC work center. VZ's descriptions ignore the ability of the OSS to reject certain LSR errors directly back to the originator without the need for manual intervention. This is an existing function of Verizon's OSS and, more importantly, is the most efficient forward-looking means for handling fallout. Yet VZ's work activity descriptions ignore this automated functionality. The following table illustrates proper descriptions of the tasks of the TISOC work groups for processing service requests received electronically.

Step	Revised Description
	TISOC
1	(R) OSS identifies errors on LSR, New (initial) request, RMA is printed.
2	(R) OSS identifies errors on LSR, Change (existing) Order, RMA is printed.
3	(R) OSS identifies errors on supplemental (existing) LSR, RMA is printed.
4	Investigate and resolve errors on LSR, e.g., return errors to CLEC, or manually establish Service Order in SOP.

These revised descriptions show the relationships among the order types, OSS interactions, and the activity being performed. The revised descriptions are not ambiguous as to the work function being performed. STEPS 1-3 are automatic process

[14] Lucent's Network Reliability Center located in Aurora, Colorado is a NOC and translation input center.

steps performed by an OSS and involve no manual tasks. The (R) on those entries indicates that those particular costs should be recovered as part of recurring rates.

The following table is another example of the ambiguous tasks littering the VZ-MA NRCM. The table was extracted from Verizon's NRCM and lists the work activities specified for the CPC work groups. The activities listed are ambiguous and leave the intelligent reader entirely unclear about what work process is actually taking place and how it relates to the OSS.

	CPC – Specials (VZ-MA NRCM)
1	Receive request for service and access TIRKS to initiate work and make a final assignment of network facilities.
2	Release order from TIRKS to WFA for coordination and dispatch.
	CPC – Message (VZ-MA NRCM)
1	Receive the request for service and access TIRKS to initiate work on the order.
2	Based on the designed network path, make a final assignment of network facilities and release the order from TIRKS to WFA for coordination and dispatch.
3	Design the network path and make the final assignment of network facilities.
4	Release order from TIRKS to WFA for coordination & dispatch.

Again, the following table illustrates a more appropriate designation of the work activities. It begins with the OSS identifying certain conditions which will require manual assistance. Steps 1-2 represent an automatic function inherent within the OSS and require no manual effort. Step 3 occurs when Verizon discovers and corrects database errors, and then re-executes the service request through automatic processing within the OSS. The cost for this task should be recovered as part of recurring rates in as much as corrections to the database should be recovered as database maintenance expenses. Step 4 is the resolution of the RMA. This may involve rejecting the request back to the

originator because the facilities requested by the CLEC are not available, or because the nature of the request requires that CPC technicians manually establish the order within the system. If the CPC tasks were clearly designated and delineated in this way, the necessity of the task could be determined by identify the actual conditions that cause the fallout and identifying the steps associated with resolution of that condition.

	CPC – Specials & Message (revised)
1	(R)-OSS identifies error conditions on service request (e.g., TIRKS).
2	(R)-OSS automatically returns LSR errors to the originator.
3	(R)-Perform database updates, and re-execute the Service Order request
4	Investigate and resolve RMA manually.

Q. THROUGHOUT YOUR TESTIMONY YOU HAVE INDICATED THAT THE RCCC/RCMC WORK CENTER TASKS ARE UNNECESSARY IN AN EFFICIENT WORK FLOW PROCESS. PLEASE EXPLAIN.

A. From the tasks indicated, the work preformed by this workgroup appears to be duplicative. RCCC/RCMC simply contacts other work groups who contact another work group to inform them that they have work to do. This is another layer of cost that is not needed in an efficient workflow process.

D. THE VERIZON NRCM INAPPROPRIATELY AGGREGATES CONNECT AND DISCONNECT CHARGES.

Q. DO YOU HAVE ANY COMMENTS ON VERIZON'S CHOICE TO AGGREGATE CONNECT AND DISCONNECT CHARGES IN THE NRCM?

Yes. The Verizon NRC rate structure improperly proposes to recover connect and disconnect charges at the same time. Although this has been the pricing structure used

for retail customers, for the reasons discussed below, this approach is inappropriate in a wholesale environment. Quite simply, CLECs are not typical retail customers.

CLECs should not have to pay the cost of disconnecting a loop at the time of ordering. Instead, a disconnect fee for an unbundled loop should only be charged at the time disconnection is ordered. Requiring an entrant to pay for disconnection at the time it orders a connection violates principles of cost causation in that the cost of disconnection is not incurred unless or until a facility is actually disconnected.

The rationale in the retail environment for charging for disconnect at the time the end user orders service is that the end user might not be either willing or available to pay a disconnect charge when he or she chooses to cancel the service (especially if the service was terminated unwillingly). Unlike some retail customers, Verizon should be able to find AT&T and WorldCom to collect a disconnection charge. A CLEC, also unlike a retail customer, is in an ongoing business relationship with Verizon, essentially eliminating the likelihood that the CLEC would simply refuse to pay disconnect fees legitimately owed.

E. THE VERIZON NRCM MISCLASSIFIES RECURRING AND NON-RECURRING COSTS

Q. WHAT IS YOUR NEXT CRITICISM OF THE VZ-MA NRC MODEL?

A. As demonstrated above, VZ-MA's NRC model improperly ignores the distinction between non-recurring and recurring costs, which leads to incorrect and inflated NRCs. If VZ-MA is allowed to recover the cost of *recurring* activities in *non-recurring*

charges, the net effect is a double recovery of costs -- a windfall that will end local access competition before it can begin.

Q. HOW CAN THIS DEPARTMENT DETERMINE WHICH ACTIVITIES SHOULD BE CLASSIFIED AS RECURRING OR NON-RECURRING?

A. A simple solution to this problem would have been the classification of each and every activity within the NRCM as recoverable in either recurring or non-recurring rates. This is the approach that AT&T used in its development of its NRCM. As directed by the FCC, AT&T complied with the methodologies outlined in the First Report and Order and clearly delineated activities with a cost classification using unambiguous task descriptions that demonstrate whether the benefit produced by the task is realized only by the CLEC. Verizon's NRCM does not conform to this approach and therefore should be rejected.

In classifying activities, the benefit the task produces must be examined. If the task is necessary on <u>every CLEC request</u> for a particular UNE, and *produces* an *exclusive benefit* only to the CLEC, then it is more than likely a non-recurring cost. As an example, CLEC requests for UNE-loops that are provisioned on copper feeder facilities will require the placement of a cross-wire between the ILEC's cable pair at the MDF to the CLEC's equipment for each and every request that uses copper feeder facilities. Therefore, the task associated with this cross-wire placement produces an exclusive benefit to the CLEC and thus its cost should be recovered in non-recurring

rates. The cross-connect will be removed when the CLEC ceases to use that particular facility.

In contrast, the activity associated with the "field cross-connect at the SAI," will benefit both Verizon and the CLEC. It is not a temporary cross-connection, but is a requirement to make a functional path between the end user and the central office. It remains in place when the CLEC ceases its use of the UNE loop and is left in place to serve other requests, either Verizon's own retail customers or the customers of another CLEC. This field cross-connect cost, therefore, should be recovered through recurring costs.

1. The Provisioning Work Tasks Associated With Field Installation Work Groups Are Unnecessary.

Q. PLEASE DESCRIBE AND IDENTIFY THE PROBLEMS ASSOCIATED WITH THE FIELD INSTALLATION WORK GROUP.

A. VZ-MA's NRCM includes Field Installation tasks that are not required on every request, and are not consistent with the way Field Installation technicians are dispatched for retail services. Additionally, the field installation included in the VZ-MA NRCM will not be undone when the UNEs are disconnected, but will continue to benefit the network. Therefore, any expense associated with these tasks should not be recovered in non-recurring rates. The following table is a summary of my comments on individual Field Installation work activities.

	FIELD INSTALLATION Task	Comments
1	Obtain Dispatch Info via CAT	This task needs to be associated with the task for which a dispatch is required. If the task is fix a network

		related problem (such as the work between the NID and the central office) then the time associated with this task should be recovered as a recurring cost activity against the element for which it required.
2	Travel from garage or previous job.	Same reason as Task #1
3	Gain Access to Prem. and demarcation point / NID.	Ambiguous as to the reason this is necessary, see Task #1
4	Locate terminal and/or cross-connect box feeding premises.	This task is only necessary to investigate a problem with the network (such as the work between the NID and the central office) or to construct the loop element, in either case it's a recurring cost activity.
5	Line and station transfers.	This task represents a re-arrangement of Plant, a cost that should be recovered by the recurring rates in network maintenance expenses. They may perform Line and station transfers in conjunction with a service request, however this task is still a recurring cost activity.
6	Contact MLAC, if necessary, for new pair assignment	The reason for this task is unclear, and can be caused by the assignment (network inventory) being defective. Either the OSS assigned the incorrect location because of incorrect relationships of the data representing the network or because the Plant is defective. In either case it's a recurring cost activity to fix the plant, including the OSS. Verizon may also argue that this task is necessary because the CLEC supplied the wrong address on the request. If this is the case when the CLEC resubmits a corrected order, (for which they are charged an additional NRC), the proper facilities will be assigned, and no dispatch will be necessary.
7	Work with Frame, and / or RCCC if necessary, for new pair assignment	See task # 6
8	Place intermediate field X-Conn. and NI (SI)	Recurring cost activity because it's a requirement of the UNE to be functional.
9	Place plug-in if required / work at remote terminal.	Recurring cost activity because it's a requirement of the UNE to be functional.
10	Place block and/or drop wire from serving terminal to Network Interface Device (NID).	Recurring cost activity because it's a requirement of the UNE to be functional.
11	Place Network Interface Device (NID) at premise where one does not already exist.	Recurring cost activity because it's a requirement of the UNE to be functional.
12	Place and option any electronics associated with Enhanced Digital Unbundled Services.	Recurring cost activity because it's a requirement of the UNE to be functional.
13	Verify that TC dial tone is present on assigned facility.	This task is not necessary on every request. ILECs only perform this task if they have detected a problem with the Plant. Therefore, it's a recurring cost activity as discussed above
14	Perform end-to-end tests for 4-wire and digital facilities provisioning.	The Field Installation technician is performing a test of the network, to ensure it meets the requirements of that particular UNE. Network related "E. F. & I." Expenses are recovered in the recurring rates.

15	Call RCCC to notify maintenance testers of the appropriate source of the suspected trouble(s).	Clearly a maintenance activity that should be recovered through maintenance expense factors in the recurring rates.
16	Designate (tag) circuit for subsequent identification at demarcation point. (NID, Term, SNI).	Not necessary for every request. The identification of the circuit provides a benefit to Verizon's technicians.
17	Work to assure that the TC dial tone can reach its end-user at time of installation.	See task #13
18	Work with RCCC to assure the TC end-user service is provisioned as requested.	See task #13
19	Provide demarc. info / location / circuit info not in the company's operating systems.	See task #16, This Task provide a benefit to Verizon's network, i.e., the data contained in the OSS.
20	Field Tech enters completion into WAFA.	This task is not clear on why the technician was dispatched in the first place. As discussed above, if any work is preformed between the NID and the central office, then it's a recurring cost. See task #1
21	Return to reporting location at the end of the work day.	See task #1
22	Perform administrative functions associated with referring a trouble to Cable department.	Task is related to maintenance problems, a recurring cost activity.
23	Receive Info to Test for CLEC reported trouble in the field ("OUT" or outside plant). **(Misdirect Out)**	Task is associated with the cost estimate of (Misdirect Out) separate element
24	Test to isolate CLEC reported trouble and determine that it is not as reported. **(Misdirect Out).**	Task is associated with the cost estimate of (Misdirect Out) separate element
25	Notify RCCC trouble is not in the loop where it was reported to be by the CLEC. **(Misdirect Out)**	Not necessary when the Technician has field access terminal (CAT).
26	Labor time and material increment.	
27	Perform premise end-to-end testing.	The Field Installation technician is performing a test of the network, to ensure it meets the requirements of that particular UNE. Network related "E. F. & I." expenses are recovered in the recurring rates.

While these Field Installation activities may be necessary to ensure that Verizon is delivering the requested UNE, they are not appropriately classified as non-recurring costs. I, therefore, recommend that the field installation rate element be eliminated from Verizon's NRCM. These activities and their cost do not belong in a NRCM; they belong in the recurring cost model and should be recovered only in recurring rates. If a CLEC requires the assistance of the Field Installation workforce to perform activities on

the customer side of the NID, the appropriate recovery may be arranged through time & material charges.

Q. WHY DO YOU BELIEVE VERIZON SOUGHT TO RECOVER THE COST OF FIELD INSTALLATION ACTIVITIES IN NON-RECURRING RATES?

A. Verizon seeks to recover any cost that can be remotely related to a CLEC service order as an NRC. Verizon's list of activities in the NRCM stems from the embedded network and not from a properly forward-looking network construct. When you assume the embedded network as a starting place, you come to the conclusion that certain unfavorable conditions exist within that network. This improper assumption is evident in Verizon's inclusion of Field Installation activities for pair conditioning in the NRCM. In Verizon's Testimony they present this "pair conditioning" requirement and admit network assumptions that are not forward-looking. AT&T asked Verizon to describe the forward-looking network construct (AT&T-VZ 6-19-b), to which Verizon replied:

> (b) Verizon MA's forward-looking network design conforms to Carrier Serving Area ("CSA") standards. Under CSA standards, cables should ideally not extend more than 9,000 feet from the Remote Terminal ("RT") at 26 gauge, or 12,000 feet if mixed (24 and 26) gauge. The percentage of loops constructed with loop lengths exceeding 18,000 feet would effectively be zero (0%) in a forward-looking network.

In this forward-looking network, no pair conditioning would be required. Therefore Verizon has based its NRC model on a version of the embedded network, not on this forward-looking network. VZ-MA's NRCM is, therefore, not forward-looking and not TELRIC-compliant.

Q. PLEASE GIVE OTHER EXAMPLES OF ACTIVITIES THAT VZ-MA INCORRECTLY IDENTIFIES AS NRCS.

A. Generally speaking, all non-capital costs directly related to operation and upkeep of plant should be recovered in recurring rates, not as NRCs. Therefore, any tasks that suggest maintenance activities like "Contact MLAC, if necessary, for new pair assignment" are inappropriate to recover as non-recurring costs, because they are necessary only to remedy an existing problem with Verizon's outside plant. This concept applies equally to the back office operations necessary to dispatch technicians (e.g., RCCC for general administration).

Verizon also included in its NRC model tasks like "If a problem occurs, resolve the problem with field installation technicians and the RCCC to insure that the CLEC can reach its end-user at the time of installation." Here again, this task suggest there is a problem with the plant and, as such, the cost recovery does not belong in the NRCM. The CLEC did not cause the plant to become defective, nor did it cause the assigned facilities to fail to reach the end-user customer. Even though this task may be a necessary step in the provisioning process, it is properly characterized as plant repair/maintenance and hence is not a non-recurring cost.

Verizon may argue that cost recovery for this task is appropriately part of the NRCM because this task is sometimes made necessary by the CLEC, for example, when the CLEC provides the wrong address on a service request. However, Verizon's own application of the task contradicts this argument. Verizon intends to apply additional NRCs for service ordering and provisioning activities when the assignment of facilities needs to be changed. In every instance, however, it is the CLEC's responsibility to correctly indicate where the facilities are needed. If a CLEC does indicate an incorrect address, the CLEC will issue a corrected service order and Verizon's systems will process a cancellation of the original request and the assignment of the proper facilities to the requested (new) service address. It is, therefore, inappropriate to charge for problem resolution on both the incorrect and correct LSRs, because such an approach results in a CLEC paying for problem resolution twice. Verizon's responsibility is simply to deliver what is ordered. It is the CLEC's responsibility to order what is needed.

Another example of a task Verizon improperly claims should be recovered in non-recurring rates is placing circuit packs to provision "special" facilities/circuits. The Central Office frame technician uses this task only when the equipment within the Central Office needs to be changed to meet service demands. It also is the same type of task used to build the Central Office switch and is, therefore, also properly reflected in recurring rates. Once the circuit packs are placed, they become part of Verizon's

inventory and are available for Verizon to assign to any service request, including their own.

In addition, several related work activities included in the NRCM indicated technicians were working on network related problems. For example, if the service order assignment needed to be changed (pairs swapped) because it was assigned incorrectly, for example, being assigned out of the wrong terminal location, Verizon inappropriately treated this as a NRC.

IV. FLAWS IN THE VERIZON NRCM ARE EASILY VISIBLE THROUGH EXAMINING NRCS FOR SPECIFIC UNES.

A. THE HOT-CUT LOOP MIGRATION PROCESS DEPICTED BY VERIZON ILLUSTRATES VERIZON'S MODELING OF UNNECESSARY MANUAL TASKS IN ORDER TO RECOVER THE HIGHEST POSSIBLE NRCS.

Q. CAN YOU PLEASE DESCRIBE THE PROBLEM WITH HOW VERIZON INTENDS TO TREAT CUSTOMERS MIGRATING LOOPS TO THE CLEC?

A. The migration process for loops should reflect an efficient cost-effective method of interconnection. The process should provide end-users uninterrupted service when changing local telecommunications providers. The processes depicted in Verizon's cost worksheets don't reflect a seamless process, instead they reflect an intensely cost prohibitive process, including many inefficient, redundant, and time consuming manual tasks.

Basically, there are three fundamental flaws with NRC rate development for hotcut loops in the Verizon NRCM.

1. The process for migrating customers served by the 20% of the network using copper feeder is modeled assuming unnecessary handholding and oversight by the RCCC.

2. Verizon's "IDLC to Copper HotCut" rate development suggests Verizon intends to treat migrating customers with IDLC loops differently, by migrating the customer's loop to analog facilities at the time of conversion. Conversion appears to be accomplished by converting the IDLC fiber feeder loop to UDLC facilities appearing at the MDF. This type of conversion is completely unnecessary in the forward-looking network, and has no purpose other than to inflate NRC costs. Given that 80% of the Verizon network consists of fiber feeder with 100% digital switching, a forward looking model would assume that 80% of migrations could be accomplished over an electronic IDLC (GR303) interface, and would not require an appearance on the MDF.

3. The Verizon NRC rates for Two Wire Loops use a melded cost reflecting both Digital and Analog loops. This ratio is based on an assumed recurring cost network (which Verizon claims) is 20% copper, 55% UDLC, and 25 IDLC (GR-303). This recognition supports AT&T and WorldCom's assertion that Verizon can effectively deliver unbundled loops over an IDLC (GR303) interface. In contrast, Verizon's Hotcut rates do not reflect this same mix of technologies. Verizon has developed a Two Wire Hotcut Initial (and Additional) NRC rate which clearly indicates 100% analog connections at the

MDF. These rates do not reflect the same network mix as indicated in the 2 Wire Loop rate calculation. Since the Hotcut order will produce an unbundled 2 wire loop, Verizon should have conformed to the same rate approach as they did for the Two Wire Initial; in other words a melding reflecting an 80%-20% fiber-copper network mix.

To illustrate these points, I will address migration of a customer currently on copper feeder facilities, identified on Verizon worksheet #3 "2 Wire Hotcut Initial." (Included in Exhibit RJW-7) Then, I will address customers on fiber feeder (IDLC), for which Verizon unnecessarily complicates the migration by moving that customer from their fiber (IDLC) facilities to copper feeder facilities, represented by worksheet #5" "IDLC to Copper HotCut Initial" (also included in Exhibit RJW-7).

Q. CAN YOU EXPLAIN PROBLEMS YOU IDENTIFIED WITH VERIZON'S 2 WIRE HOTCUT PROCESS THAT IMPROPERLY INFLATE NRCS?

A. When service orders are issued to migrate customers currently on copper feeder or analog UDLC facilities, Verizon migration (hotcut) worksheet #3 applies. However, the hotcut process modeled by Verizon involves continuous unnecessary hand holding by the RCCC. This hand holding results in 19 RCCC tasks, combined with 5 RCMAC tasks, and 11 CO FRAME work tasks consuming (in the worst case) 9.64 hours of labor.[15] Verizon's NRCM also indicates that not all tasks will be necessary all the time, and currently only assesses 241.55 minutes of labor to the entire process.[16] Forward-

[15] This is the total labor identified assuming all tasks need to be provided for a 2 wire Hotcut initial.
[16] The time estimate was obtained by combining "connect times" with the "connect typical occurrence"

looking adjustments reduce the total slightly to 211.60 minutes of labor, still more than three and a half hours, with the bulk of the time being saved in the service ordering process. In my opinion this is not reflective of an efficient process using a forward-looking network.

Q CAN YOU EXPLAIN WHAT THE MIGRATION OR HOTCUT PROCESS SHOULD BE FOR A CUSTOMER PROVISIONED USING COPPER OR ANALOG FACILITIES?

A. The migration process involves terminating the CLEC service over a cross-wire at the MDF between the cable pair and the ILEC port by placing a new cross-connect to the new CLEC equipment. (Please see exhibit RJW-5). At the date and time scheduled for migration, the ILEC OSS releases translations into the ILEC switch to effectively "turn-off" the ILEC dial tone. If necessary, the ILEC OSS points the telephone number to the CLEC switch allowing local number portability. At approximately the same time, or shortly thereafter, the CLEC OSS releases translations into the CLEC switch to "turn-on" CLEC dial tone. If both companies act as indicated on the order, the customer will be migrated seamlessly and without inordinately expensive manual labor. There is no reason to involve the RCCC in an automated, efficient process. The CO technician performs the necessary tasks to effect the connections between the UNE-Loop and the CLEC's equipment. The placement of the cross-wire can be made as soon as the technician receives the service order. There will not be CLEC dial-tone until the CLEC activates its switch translations, after the ILEC terminates its dial tone.

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factors, and summing the total.

This central office-wiring method is exactly the same method (in theory) Verizon uses to provide service to its retail customers.

Q. IS THIS THE SAME HOTCUT PROCESS THAT VERIZON HAS IDENTIFIED IN ITS NRCM?

A. The end result is the same, but the process is not. Verizon's process is far more labor intensive and unnecessarily controlled by the RCCC. After the CLEC has performed its pre-ordering, ordering, and provisioning steps as described above for the 2 Wire Loop, Verizon diverts activation of the UNE to the control of the RCCC.

This process begins with the "2 Wire Hotcut Initial" (Verizon NRCM worksheet #5 in Exhibit RJW-7) where the RCCC/RCMC screener accesses an OSS to identify a Hotcut order (Task #1), followed by an order analysis, and elimination of any roadblocks on the order (tasks #2, #3, &4). Then the screener manually assigns the order to a technician (task #5) and performs "administrative checks" (task #6). The combined time for these initial 6 events is 37.40 minutes, of which Verizon shows only 30.28 minutes are necessary today.[17] Verizon's forward looking factors reduce the time to 18.24 minutes. Verizon does not indicate whether the forward looking reductions are due to process improvements or the probability of not having to use this task at all in the forward-looking environment.

Next, Verizon asserts that for every order the (RCCC) will take an average 18.18 minutes to contact the CLEC and ask them if they really meant to order service (Task

[17] The 30.28 minute time estimate was obtained by combining "connect times" with the "connect typical

#18, Contact CLEC to verify activity). This is ridiculous; the order itself represents the CLEC's commitment to order service.

Next, Verizon identifies another 28.49 minutes to schedule work-teams. This is nonsensical in that scheduling is, or should be, done by the Work Force Administration (WFA) OSS which is programmed specifically for that task.

Verizon then has the RCCC technician make a series of phone calls to the other workgroups (RCMAC & CO FRAME) telling them they have work to do (task #19). These communications should be automated. This inefficient sequence also appears as 9 additional minutes in CO Frame and RCMAC tasks #1. CO Frame task# 1 is also redundant in that the CO Frame technician already knows (from a pending orders list) that there is an order pending in their OSS.

In task #2 the CO Technician goes to the FOMS/TRIKS OSS, retrieves the order, and confirms that the information on the order is the same as the information just provided over the phone by the RCCC/RCMC technician. Again, Verizon's tasks reflect the inefficiencies of not using the OSS as they were designed to be used. Expending RCCC labor time to duplicate automated OSS instructions defeats the purpose of automated OSS -- efficiency and cost savings.

Next the Verizon model has the CO Technician check to ensure that existing central office end-user (ILEC) dial tone is leaving the central office on the correct cable and

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occurrence" factors.

pair and reports back to the RCCC (CO Frame task #5). In essence this task is "Lets see if our own records are right." This 3.05 minutes of labor has no purpose other than to inflate NRC costs.

At this point in the Verizon work process, the CO Frame Technician pre-wires the frame by terminating cross-connections at the CLEC equipment (port) and at any necessary tie pairs. This is followed by "tying in" and "tagging" the wire at the reuse cable pair facility (CO FRAME task #6). Additionally the CO Frame Technician returns to the CLEC equipment (port) and confirms assignment by verifying that CLEC dial tone is present at the assigned location. Once again, Verizon verifies that cable and pair assignment is correct, notifies RCCC of troubles, and obtains a new assignment (CO Frame task #7). Task # 7 is extremely alarming because one would not expect the CLEC dial-tone to be present unless the due-date & due time has already passed. This task indicates that Verizon anticipates missing the target time the CLEC has requested for the service to be migrated.

The problems with Verizon's hot cut process are also reflected in CO Frame task #10 which states that "on due date at frame due time," the CO frame technician will work under the direction of RCCC and "cut-off/cut-in" wires at reuse cable pair facility." Verizon would then have the CO Frame technician get yet another phone call from the RCCC to receive the go-ahead to migrate the customer. This is also completely unnecessary. The CO Frame technician can (ahead of scheduled due date and due time) terminate the cross-connections at the CLEC equipment to the cable and pair

without affecting the working service. The cable pair is double tapped going to both the ILEC port and the CLEC equipment (port). If the service order says the due time is 10:00 am, it is expected that the ILEC's OSS would release the translation message at that time to the ILEC's switch, thus terminating their service. The CLEC's OSS will then release its translation message to activate CLEC service as scheduled, thus migrating the customer without the need of need of constant monitoring by the RCCC.

This process is not "Pie in the Sky," nor is it new to Verizon. A similar process has been in use for years to migrate thousands of customers in a matter of seconds from one switch to another during switch cut-over conversions. The new switch office equipment is cross-wired to existing cable pairs and translations are programmed in the switch. On the night of the conversion, instructions are sent to the old (disconnecting) switch to terminate (shut-down) service in that switch. Within a few seconds a similar instruction is sent to the new switch to turn-on translations. This allows everyone in the old switch to be migrated to the new switch. While I was at NYNEX as an ESS Conversion supervisor, I was personally involved with and saw many switch conversions. Verizon should have modeled their hotcut process on their switch conversion process, but they did not. Instead they modeled an unnecessarily labor intensive process to incur the highest possible cost.

A number of other CO Frame tasks would be eliminated if Verizon adopted the efficient hot cut process I described above. These include Task #15, Load WFA tickets, check status of order activity, and report completion of order/frame work for WFA tickets

(NDSUP and NDSUT) to the RCCC. Verizon has also included, with tasks #17 & #18, a total of 13.86 minutes of labor for field installation technicians when in fact no field Installation work is necessary. For the "2 Wire Hotcut initial" it is assumed that the existing loop will be reused. This cost is sheer fantasy.

Q. YOU INDICATED THAT VERIZON HAS A DIFFERENT PROCESS FOR MIGRATING LOOPS WHEN THEY ARE ON IDLC. CAN YOU EXPLAIN THE DIFFERENCES?

A. Most notable about Verizon's "Cost Summary Worksheet" is that Verizon has not modeled the migration process when the customer remains on IDLC fiber feeder and the customer is electronically migrated to the CLEC digital facilities. There is no technical limitation as to why this type of migration cannot happen. Therefore, there is no reason why Verizon should exclude this from their cost summary.

It appears from worksheet #5 in Verizon's NRCM ("IDLC to Copper Hotcut Initial") (included in Exhibit RJW-7) that Verizon has priced the tasks necessary when the migrating customer is on IDLC by claiming that facilities need to be changed over to analog UDLC (like copper). Using Exhibit RJW-1, however, it is clear that the customer whose ILEC service is on an IDLC loop is digitally connected to the IDLC equipment at the remote terminal. The migration process should involve merely an electronic cross-connect instruction to effectively move the customers IDLC channel to the CLEC's digital facilities. It does not require any manual activities by the CO Frame technicians.

Q. LOOKING AT VERIZON'S NRCM, WORKSHEET 84, IDLC TWO WIRE NEW INITIAL, IS THIS A REPRESENTATION OF AN IDLC LOOP AND SHOULD THIS BE USED AS A PROXY FOR DETERMINING HOTCUT MIGRATION COSTS?

A. Verizon NRCM Worksheet 84 represents a process using IDLC technology to electronically cross-connect ILEC unbundled loops with CLEC interconnection facilities, which would be efficient if properly done. It demonstrates no CO frame activity and recognizes the technical capability of the GR3O3 interface. Exhibit RJW-3 demonstrates that the customer's loop originates at the NID and is connected through the SAI to a pair produced by the IDLC equipment at the remote terminal. From this point, it is electronically converted to a DS0 channel on a DS1 running into the central office equipment. Here it is electronically cross-connected to the CLEC's DS1 interconnection facilities.

Verizon's recognition of this process is significant;[18] however, Verizon has loaded up the process with unnecessary tasks and non-supported work times, significantly limiting its value as a proxy for determining hot cut migration costs. The worksheet indicates five workgroups are involved. The TISOC represents the service ordering cost. The MLAC, RCCC/RCMC, RCMAC represent the provisioning cost, and the Field Installation workgroup represents Field installation cost. As I have already expressed

[18] Verizon has used this worksheet to develop a melded price for the unbundled loop. This is evident by the cost calculations on their "Cost Summary Worksheet." To determine the cost of a 2 Wire loop initial they have applied 75% of the cost from the 2 Wire loop and 25% of the IDLC Two Wire New Initial. This is significant because it recognizes that it is technically feasible to interconnect 2 & 4 wire IDLC loops to the CLEC. Therefore, Verizon must concede that it is technically feasible to migrate any customer on IDLC loop to the CLEC. Consequently, when they developed the cost of the 2 & 4 wire Hotcut, they should have included the same application of percentages as they did for the 2 wire loop. They did not. The reasons why they did not include the same percentages are unclear, except for the fact that they themselves wanted

throughout this testimony, many of the specific tasks are unnecessary and the work times are excessive .

The RCMAC workgroup task #2 indicates manual activity required 10% of the time (this would be in the form of service order fallout). This also indicates the OSS will be delivering error free translation messages 90% of the time. However, the time indicated to create these translation messages is extremely high. While I was an employee of NYNEX, I was personally responsible to create similar types of translation messages as an ESS Conversion Station Assignor and observed hundreds of messages as a Supervisor. This task should take no more than 5-10 minutes per basic POTS message.

Even more cryptic is the task "Receive notification through PARIS of need to perform a manual translation change on working service." If this element is for a NEW Initial request (and I suspect that from TISOC Task #1), the wording should be changed to reflect just that. If the service is working already, the service request would only be to change features, and this is priced on worksheet # 28. Therefore this task (RCMAC Task #2) again is unnecessary.

Looking at Task #5 "Obtain notification from the RCMC of trouble conditions on a CLEC end-user's line requiring RCMAC analysis and translation changes" appears to be purely a maintenance type of task. This should have been classified as a maintenance task recoverable only as a recurring cost, not as a NRC.

B. VERIZON'S UNE-P NRC CHARGES ARE CALCULATED INCORRECTLY USING INCORRECT ASSUMPTIONS AND WORK TASKS.

Q. PLEASE EXPLAIN YOUR CONCERNS REGARDING UNE-P ORDERS.

A. Verizon is proposing four UNE-Platform NRC rates. In the table below I have extracted the UNE-P elements from the VMA-NRCM, Cost Summary worksheet.

Line	UNE/Service Description	Service Order (Line 17)[1]	C.O. Wiring (Line 18)[1]	Provi-Sioning (Line 19)[1]	Field Install'n (Line 20)[1,2]	Manual Surcharge (Line 17)[1,3]
36	**Two Wire Analog-Digital UNE-P New Initial**	$1.14	$27.93	$24.28	$104.92	$13.00
37	**Two Wire Analog-Digital UNE-P New Additional**	$0.00	$15.51	$21.34	$34.61	N/A
38	**Two Wire Analog-Digital Conversion UNE-P Initial**	$1.14	$0.00	$5.12	$104.92	$13.00
39	**Two Wire Analog-Digital Conversion UNE-P Add'l**	$0.00	$0.00	$4.95	$34.61	N/A

The UNE-Platform is a combination of UNE-Loop and UNE-Port elements combined to provide CLECs the ability to deliver POTS type services to their customers. What Verizon has done is to create a new element called "**Two Wire Analog-Digital UNE-P**" which I believe is an analog or digital loop combined with the corresponding analog or digital port. On the cost summary worksheet Verizon gives the source of the claimed NRC rates. On the following table you can identify the source worksheets within the VZ-NRCM on which Verizon based its costs.

Line	UNE/Service Description	Service Order	C.O. Wiring	Provi-sioning	Field Install'n	Manual Surcharge
36	**Two Wire Analog-Digital UNE-P New Initial**	36	1,84	1,84	1	59

to reflect the highest possible cost to deter new entrants from entering the marketplace.

37	**Two Wire Analog-Digital UNE-P New Additional**	37	2,85	2,85	2	N/A
38	**Two Wire Analog-Digital Conversion UNE-P Initial**	38	38	38	1	59
39	**Two Wire Analog-Digital Conversion UNE-P Add'l**	39	39	39	2	N/A

For service ordering NRC you can see Verizon has identified individual worksheets representing the claimed TISOC involvement. This represents service order fallout. While Verizon reflects a fallout rate of approximately 5% for UNE-P, as opposed to 23% for the loop element individually, this is still too high.

Verizon claims that TISOC Tasks 1-3 are necessary and the following table reflects the forward-looking adjustments which is the fallout rate.

	TISOC Task #1	TISOC Task #2	TISOC Task #3
Two Wire Analog-Digital UNE-P	4.68%	2.34%	0.56%
Two Wire Analog-Digital Conversion UNE-P (tab #38)	4.68%	2.34%	0.56%

The table below represents the time attributed to those tasks.

	TISOC Task #1	TISOC Task #2	TISOC Task #3
Two Wire Analog-Digital UNE-P	20	15	9
Two Wire Analog-Digital Conversion UNE-P (tab #38)	20	15	9

TISOC Task #2 which refers to; "Receive Local Service Request from the CLEC and print, review, type and confirm the order request for changes in existing account" would be correct if it was applied to conversion or Hot-cut orders. And TASK #1 "Receive Local Service Request (LSR) from the CLEC and print, review, type and confirm the

order request for new installation and/or account" applies to new (initial) installations. But as you can see, Verizon includes time and occurrence for both tasks in the UNE-P NRC calculations, which does not make sense. In essence, Verizon is double recovering.

The CO Wiring NRC rates for new UNE-P orders reveal even more glaring problems with VZ-MA's NRCM. Verizon has priced the CO wiring as if Verizon were connecting the ILEC's loop to the CLEC's port. This is completely incorrect. The UNE-P (new initial) is accomplished by connecting the ILEC's loop and the ILEC's port together. In many cases these individual elements are already assembled as explained in the AT&T NRCM support documentation (NTAB). Verizon, like other ILECs, has always left in place loop & port combinations for their own retail services. To assess NRCs for wiring these elements together, when in fact the wiring is in place is wrong and another example of how Verizon's NRCM exaggerates costs.

Provisioning UNE-P is in many cases only a translations message, which should flow-through from the OSS to the switch. Having layers upon layers of manual tasks and coordination tasks is neither efficient nor forward-looking.

V. CONCLUSION: SUMMARY OF VZ-MA'S CLAIMED NRCS

Q. PLEASE SUMMARIZE YOUR REVIEW OF VZ-MA'S NRC MODEL AND ITS CLAIMED NON-RECURRING COSTS.

A. In order for a cost study to produce NRCs that are consistent with TELRIC, it must begin with the same forward-looking network model used to model recurring costs.

The NRCM must develop prices reflecting an efficient ILEC operating in a competitive environment, using the most efficient technology and processes available today under the forward-looking network construct. As such, NRC prices will compensate the ILEC *only* for the efficient costs that it would incur under the forward-looking network construct and would not obligate CLECs to compensate ILECs for costs stemming from any past or embedded inefficiencies. Non-recurring cost elements should include only those activities associated with the pre-ordering, ordering and provisioning processes that benefit the customer placing the order (i.e., the CLEC). For all of the reasons demonstrated above, VZ-MA's NRC cost study fails to satisfy these requirements.

Moreover, an NRC cost model must assume a level of automated service order processing consistent with a very high degree of OSS mechanization. It must also recognize that ILEC departments interact with and rely on these systems to properly classify work activities. Because the OSS interaction produces a benefit to Verizon, the model should classify that activity as a recurring cost to be shared and recovered by all users of the network. The Cost Model must also identify manual work times that reflect appropriate intervals based on the use of forward looking network technologies. It should incorporate the efficiencies of automated Intelligent Network Elements found in recurring cost studies (SONET, TR-303/IDLC, DCS/EDSX, LDS, etc.) which provide for maximum electronic flow through for provisioning of orders. Finally, a proper NRC Model must calculate separately the installation and disconnection service order request

and recognize that the new entrants should not pay for disconnection unless they order the facilities to be physically disconnected. As shown above, VZ-MA's NRC model fails to satisfy each of these requirements as well. Consequently, VZ-MA's claimed non-recurring costs should be rejected.